8100 GENERAL

8100 Authority

8100.1 U.S. Coast Guard Captain Of The Port (COTP)

The Ports and Waterways Safety Act of 1972 (PWSA) (33 United States Code (USC) 1221 et seq.) provides that increased supervision of port operations is necessary to prevent damage to structures in, on, or adjacent to the navigable waters of the United States, and to reduce the possibility of vessel or cargo loss, or damage to life, property, and the marine environment. This statute, along with the traditional functions and powers of the Coast Guard to render aid and save property (14 U.S.C. 88(b)), form the basis for Coast Guard fire fighting response activities.

8100.1.1 Delegations of Authority

The Commandant, U.S. Coast Guard has delegated authority to the Captain of the Port to enforce port safety and security, and marine environmental protection regulations. This includes, without limitation, regulations for the protection and security of vessels, waterfront facilities; anchorages; security of vessels, safety zones; security zones; regulated navigation areas; deep water ports; water pollution; and ports and waterways safety.

The Commandant (G-M), and the Commander, Eleventh Coast Guard District (D11), requires the Captain of the Port San Francisco maintain a vessel and waterfront fire fighting contingency plan (See Marine Safety Manual, Vol. 6, Chapter 8). The purpose of the plan is to minimize the effects of damage to life and property in harbors and waterfront areas resulting from a major marine fire and/or explosion.

8100.1.2 Termination of Response Activity

Unless directed by the Commander, Eleventh Coast Guard District or higher authority, once response operations have begun, they will not be terminated until the fire is declared out, and the situation is under control. Termination must be by mutual agreement of the Captain of the Port and the Fire Department Incident Commander.

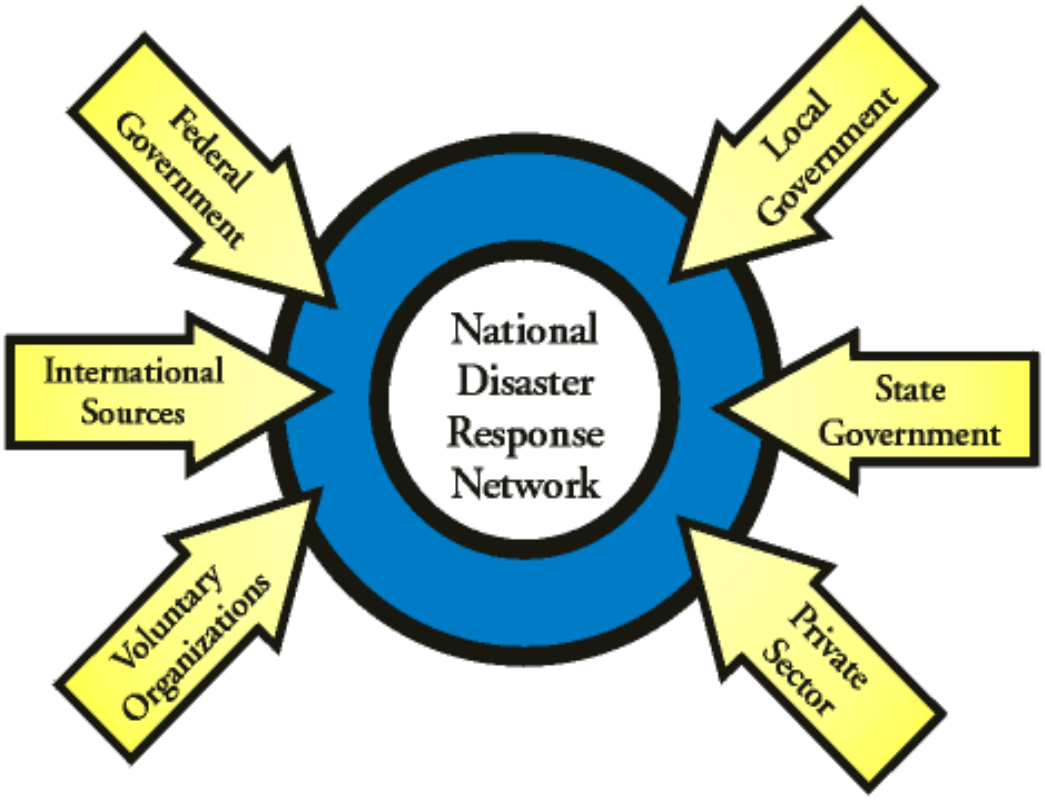
8100.1.3 Resolution of Disputes

Disputes will normally be resolved at the lowest level possible. If not resolved there, they will be referred to the command post for resolution between the senior Coast Guard and the Fire Department representatives. If not resolved at the command post, they will be referred to the Captain of the Port and the appropriate Fire Chief.

MASTER/MATES OF THE VESSEL. The Master is always in charge of the vessel, but NEVER in charge of fire fighting efforts of non-vessel personnel.*

OWNERS/OPERATORS OF VESSELS/WATERFRONT FACILITIES. These individuals are always a critical source of vessel/facility information. Regardless of other response resources, the owners/operators of vessels and facilities retain a fundamental responsibility for safety and security.

*Although Master/Mate will not ever be in charge of non-vessel personnel fighting a fire, he/she may have valuable input due to the nature of the vessel that non-vessel personnel may not be aware of.



8100.2 Dept. of Transportation, Regional Emergency Transportation Coordinator (RETCO)

Upon Presidential declaration of a Federal Disaster area, a Federal Coordinating Officer (FCO) will be appointed to act on-scene for the President and the Federal Response Plan will be implemented. The Federal Emergency Management Agency (FEMA) Regional Director (RD) will implement and coordinate the Federal Response. The Department of Transportation (DOT) is one of many federal departments designated as a primary agency to serve as federal executive agents of the FCO, responsible for the Transportation and Hazardous Materials Emergency Support Functions (ESF #l and ESF #l0). D11, as part of DOT, will support those functions through the Regional Emergency Transportation Coordinator (RETCO), who is Commander, US Coast Guard Pacific Area. The RETCO is the Secretary of Transportation's representative for emergency preparedness and response matters and is the senior regional ESF #1

official for both planning and execution.

8100.3 National Transportation Safety Board (NTSB).

National Transportation Safety Board investigators may arrive on scene during or immediately after fire fighting operations. The NTSB Investigators may be tasked with determining what caused the casualty, how effective the response was, and what actions can be taken in the future to either prevent such an incident or improve the response.

8100.4 State of California, Office of Emergency Services (OES)

The Governor's Order directs the Director of OES to prepare the State of California' s Emergency Plan and to coordinate the activities of all State agencies during the preparedness and response phases of emergencies. The Executive Order also directs State government organizations to submit agency emergency plans and procedures to the Director of OES for review and approval prior to publication, provide personnel emergency training, define lines of succession, and ensure effective use of resources during response and recovery.

8100.5 Mutual Aid

42 United States Code 1856-1856d provide that an agency charged with providing fire protection for any property of the United States may enter into reciprocal agreements with state and local fire fighting organizations to provide for mutual aid. This statute further provides that emergency assistance may be rendered in the absence of a reciprocal agreement, when it is determined by the head of that agency to be in the best interest of the United States.

8100.6 Definitions and Acronyms

8100.6.1 Definitions

CAPTAIN OF THE PORT (COTP). U.S. Coast Guard Captain of the Port. The Coast Guard officer designated by the Commandant, U.S. Coast Guard, to exercise federal responsibility for the safety and security of ports and waterways in a specified geographic area. For purposes of this plan, COTP means COTP San Francisco Bay.

CARGO INFORMATION CARD. The Cargo Information Card is a term used on tank barges to describe the products they are carrying. This is an old term that still exists but is seldom used. The MSDS (Material Safety Data Sheet) is the term that is used at this time.

COMMAND POST (CP). Under the Incident Command System, the single location from which incident operations are directed.

DANGEROUS CARGO MANIFEST. The Dangerous Cargo Manifest (DCM) is a

listing of all hazardous material cargo on a vessel and contains a great deal of information of interest to emergency response teams. Vessel information includes name, call sign, flag, port of loading and discharge and date. Cargo information includes proper shipping name, gross weight of cargo, hazard class, type of package, storage locations and an emergency response telephone number. Only hazardous materials subject to 49 CFR or the International Maritime Dangerous Goods (IMDG) code may be listed on the DCM.

FIRE CONTROL PLAN. A copy of this plan is prominently displayed in a weather tight enclosure, located outside the deckhouse (both sides usually) for the assistance of shore side fire fighting personnel. It contains a set of general arrangement plans showing for each deck the fire control stations, fire-resisting and fire-retarding bulkheads. It also contains particulars of the fire detecting, manual alarm, and fire extinguishing systems, fire doors, means of access to different compartments and ventilating systems including locations of dampers and fan controls.

INTERNATIONAL SHORE CONNECTION. This device is used to connect the water system piping of the vessel with the water supply on shore. It requires that the ship have a connection with the ship's fire system threads on one end and the standard international bolted flange on the other end. The shore side fire department must have a connection with the shore side fire department's threads on one end and the standard international bolted flange on the other end. See NFPA 1405 for additional details.

HAZARDOUS MATERIALS. These are materials which, when commercially transported, are designated by the U.S. Department of Transportation as presenting an unacceptable risk to health, safety and property. These materials are required to be carried by vessel in accordance with U.S. Department of Transportation (DOT) or U.S. Coast Guard (USCG) regulations. Regulations applicable to the transportation of hazardous materials by vessel include:

- Title 49, Code of Federal Regulations, Subchapter C
  (Packaged Hazardous Materials)

- Title 46, Code of Federal Regulations, Subchapter D
  (Tank Vessels)

- Title 46, Code of Federal Regulations, Subchapter O
  (Certain Bulk Dangerous Cargoes)

INCIDENT COMMANDER (IC). Under the Incident Command System, that person responsible for overall coordination and management of incident activities. Such activities include the development and implementation of strategies designed to mitigate the incident. The IC is usually a senior officer of the agency having jurisdiction for the incident.

- Depending on the incident location and other logistics considerations, the

IC should establish a Command Post upon arrival so that representatives from other cooperating agencies may report to this location to provide a point of contact.

• The IC should establish the functional organization with personnel designated to assist in accomplishing the goals of the Incident Action Plan (IAP).

INCIDENT COMMAND SYSTEM (ICS). ICS is a command and control system for managing a multi-agency response to an emergency. It consists of procedures for controlling personnel, facilities, equipment and communications.

MSDS (Material Safety Data Sheet) The Material Safety Data Sheet is a chemical product information guide to be used if the product becomes a hazard because of a release, fire, or other unknown reaction. The MSDS contains information as to the fire problems, health hazards, and reactivity of the chemical or product for which the MSDS was written. All chemicals and products from which chemicals were used in its manufacture must have a MSDS sheet. MSDS also contains information as to the toxicology of its product.

MARINE SAFETY OFFICE (MSO). U.S. Coast Guard field level organization responsible for carrying out the Coast Guard's marine safety missions in a specified geographic area. The MSO is headed by a Commanding Officer who is also designated COTP, OCMI and FOSC. For purposes of this plan, MSO means MSO San Francisco Bay.

OFFICER IN CHARGE, MARINE INSPECTION (OCMI). U.S. Coast Guard Officer In Charge, Marine Inspection. That Coast Guard officer designated by the Commandant, U.S. Coast Guard to exercise responsibility for commercial vessel inspection, marine casualty and personnel investigation, vessel and seaman certification, and vessel documentation. For purposes of this plan, OCMI means OCMI San Francisco.

FEDERAL ON-SCENE COORDINATOR (FOSC). The federal official pre-designated by USCG or the EPA to coordinate and direct federal response efforts to an actual or threatened discharge of oil or hazardous materials. In the case of an actual, or threatened, oil discharge which may present a substantial threat to the public health or welfare, the FOSC will direct all public and private response efforts. For the purposes of this plan, FOSC means Commanding Officer, Marine Safety Office San Francisco Bay.

MISCELLANEOUS. Other useful definitions can be found throughout National Fire Protection Association (NFPA) 1405. Sections of particular interest are:

- Chapter 1-3: Definitions
- Chapter 3-3: Types of Vessels
- Chapter 3-4: Shipboard Personnel

- Chapter 6: Special Resource Considerations
- Chapter 15: Legal Issues

SAFETY ZONE. A safety zone is a water area, shore area, or a water and shore area to which, for safety or environmental protection purposes, access is limited to authorized person, vehicles, or vessels. The safety zone is established by the Captain of the Port or the District Commander to protect vessels, structures, and shore areas. The safety zone can be fixed or mobile around a moving vessel. The Captain of the Port may direct who and what may operate within the safety zone.

SECURITY ZONE. Security zones are designated areas of land, water, or land and water established for such time as is necessary to prevent damage or injury to any vessel or waterfront facility; to safeguard ports, harbors, territories, or water of the United States, or to secure the observance of the rights and obligations of the United States. The security zone is established by the Captain of the Port or District Commander. The designation of a security zone may only be made for areas within the territorial limits of the United States.

8100.6.2 Acronyms

- CERCLA Comprehensive Environmental Response, Compensation, and Liability Act
- CFR Code of Federal Regulations
- COTP Captain of the Port
- CP Command Post
- CWA Clean Water Act
- DCM Dangerous Cargo Manifest
- DOT U.S. Department of Transportation
- FOSC Federal On-Scene Coordinator
- IC Incident Commander
- ICS Incident Command System
- IFSTA International Fire Service Training Association
- IMDG International Maritime Dangerous Goods Code
- MSFO Marine Safety Field Office
- MSO Marine Safety Office
- NFPA National Fire Protection Association
- NRC National Response Center
- OES Office of Emergency Services, State of California
- OCMI Officer-In-Charge, Marine Inspection
- OPA 90 The Oil Pollution Act of 1990
- OSLTF Oil Spill Liability Trust Fund
- PWSA Ports and Waterways Safety Act
- UCS Unified Command Structure of the Incident Command System
- VIN Vessel Identification Number

Risk Assessment

8100.8 Background Information

8100.8.1 Transportation Patterns

San Francisco Bay hosts a wide variety of commercial vessels and cargoes. Vessels carrying petroleum products and hazardous chemicals are of particular interest because of their potential for pollution incidents and/or fires. Significantly, petroleum refineries in the San Francisco Bay Area have a combined throughput capacity of nearly one million barrels per day. Accordingly, 60-70% of the overall tonnage entering the Bay at any time consists of crude oil carriers. The balance of shipping traffic usually includes passengers for hire (cruise ships and ferries), refined product carriers, containerized freight vessels, break bulk freight vessels, roll on-roll off (Ro-Ro) vessels, tugs, barges, and military vessels.

8100.8.2 Historical Considerations

Vessel fires resulting in the total loss of the vessel and its cargo or significant loss of life continue to occur throughout the world. Relatively recent incidents in this country include the T/V *Puerto Rican* (explosion and fire aboard finished petroleum tanker off the approach to San Francisco Bay in 1985), the T/V *Mega Borg* fire (crude vessel fire in pump room and cargo compartments fire off the coast of Texas in 1990), the M/V *Protector Alpha* (grain ship fire on the Columbia River in 1982) during which the vessel mooring lines were cut, setting the vessel adrift), and the P/V *Ecstasy* (Carnival Cruise Ship fire in ship's laundry occurring shortly after vessel's departure from Miami in 1998)

Waterfront fires at shore facilities have been both less frequent and less dramatic. Nevertheless, incidents such as the fires in San Francisco and the gasoline storage tank ruptures in Richmond caused by the 1989 Loma Prieta earthquake clearly demonstrate, as did the T/V *Puerto Rican* incident, that catastrophic incidents are typified by confusion, the need for the highest order of communication, and the commitment of all available regional resources.

8100.8.3 Hydrological and Climatic Considerations

SAN FRANCISCO BAY. San Francisco Bay enjoys a marine type climate characterized by mild and moderately wet winters and by cool, dry summers. There are, however, significant climate differences within the region due to its varied topography. Both east and west of the Bay are mountain ranges. As winds come off the ocean and move eastward, successively less moisture is deposited on each range such that the East Bay is substantially drier than the West Bay. Also, the farther inland from the ocean, the greater are the daily and yearly temperature fluctuations.

Winter rains generally occur from November through March and account for the great majority of the region's annual rain fall. Nevertheless, there are frequent dry spells during the period sometimes lasting weeks.

Summer weather is dominated by cool sea breezes resulting in an average summer wind speed of 15 miles per hour. Winds are characteristically light in the morning, but normally in the 20-25 mile per hour range in the afternoon. Sea fog, arriving during late evening or night, is another characteristic feature of summer weather. This fog usually disappears by early afternoon.

Detailed tide and tidal current information concerning the Bay and its approaches is provided in the Tide Tables, the Tidal Current Tables and the U.S. Coast Pilot.

SACRAMENTO-SAN JOAQUIN RIVER DELTA. The Delta's climate is characterized in summer by warm, dry days and relatively cool nights with clear skies and no rainfall. In winter, the climate is characteristically mild in temperatures, with relatively light rains, and with frequent heavy fogs. In late autumn and in early winter dense fogs normally settle in during the night and burn off sometime during the following day. December and January are considered the fog season and fog has been known to last for 4 to 5 weeks with only brief or intermittent clearing periods.

At low river stages the mean range of tide is 2.8 feet at the entrance to the Sacramento River. At other stages the tide is negligible. The upper 20 miles of the Sacramento River Deep Water Ship Channel are free of river current and flood waters. The mean range of the tide from the entrance of the San Joaquin River to Stockton is approximately 3.1 feet and tidal current is negligible. Water level is affected most dramatically during the winter months when flood levels may rise from 8 feet to 13.5 feet.

8100.9 Damage Potential

8100.9.1 High Risk Areas and Cargoes

Those areas of the Bay containing refineries and bulk petroleum transfer facilities which routinely serve petroleum tank vessels and those most typically frequented by loaded tank vessels present the greatest risk for a significant vessel explosion and fire. The following sections describe in greater detail the patterns of waterborne trade which occurs in San Francisco Bay and Sacramento-San Joaquin River Delta.

CRUDE OIL. Crude oil carriers generally follow one of the patterns described below when transiting San Francisco Bay and its approaches.

- Direct transit from the sea buoy through the Golden Gate to a refinery or oil terminal in Richmond, San Pablo Bay, Carquinez Strait, or Suisun Bay.

- Direct transit from the sea buoy through the Golden Gate to *Anchorage 5*. This usually only occurs when a vessel is awaiting berth space at the Chevron refinery in Richmond.

- Direct transit from the sea buoy through the Golden Gate to *Anchorage 9*. Laden tank vessels awaiting berth space or lightering, due to deep draft

- restrictions, transit directly to this anchorage. Some tank vessels, once sufficiently lightered, may complete off loading at a refinery in the Carquinez Strait.

- Transit from Anchorage 9 to a refinery in Richmond or Carquinez Strait. The vessels following this pattern are generally limited to small crude carriers employed regularly in lightering draft restricted very large crude carriers (VLCCs).

REFINED PRODUCT. Refined product carriers call routinely at refineries and oil terminals in Richmond, San Pablo Bay, Carquinez Strait and Suisun Bay. Refined product carriers also occasionally call at product storage facilities in Alameda and the P.G. & E. plant in San Francisco. These vessels usually transit from the sea buoy through the Golden Gate directly to these facilities.

CHEMICALS AND OTHER HAZARDOUS CARGOES. Both cargo vessels and tank vessels transport a large variety of chemicals and other hazardous cargoes over Bay and Delta waters.

- Approximately 10-20% of all cargo carried in containerships and break bulk vessels is designated as hazardous (i.e. flammable, explosive, corrosive, poisonous, etc.).

- Tankers laden with Cargoes of Particular Hazard, such as anhydrous ammonia, discharge at the Port of Stockton and the Tosco facility on the Sacramento River Deep Water Ship Channel.

- Explosive laden commercial and military vessels transiting to and from Naval Weapons Station Concord also routinely San Francisco Bay waters, and occasionally use Explosive Anchorages 12 and 14.

BUNKERING. Vessels of all types (RO/RO, T/V, Container, and Break Bulk) take on oil bunkers in San Francisco Bay. Bunkers are usually received from a barge alongside the facility where the vessel is tied up. Vessels also periodically bunker at Anchorage 9.

MISCELLANEOUS OILS. There is a modest trade in tallow, animal oil, and vegetable oils in San Francisco Bay. Small tank vessels primarily load and discharge these cargoes at facilities in Richmond. Tallow is loaded in San Francisco.

PASSENGERS VESSELS. San Francisco Bay is serviced by 3 passenger ferry companies (Golden Gate Ferry, Blue and Gold Fleet, and the Red and White Fleet) with service from 0530 hours to 0030 hours daily to and from several points in the Bay. The ferry companies also operate charter trips for parties and sight seeing trips that usually stay between San Francisco, Oakland, Sausalito, and Tiburon. The size and passenger capacity of the ferry boats vary from 100' up to 165' and carry up to 700 passengers on the larger boats. The main ports and ferry terminals are located in San Francisco, Oakland, Alameda, Vallejo, Larkspur, Tiburon, Sausalito, Richmond, and Angel Island.

CONTAINERIZED FREIGHT VESSELS. These vessels regularly call at terminals located in Oakland, San Francisco, Richmond and Alameda. Occasionally, such vessels also call at terminals in Redwood City, Sacramento and Stockton.

DRY BULK, NEO-BULK AND BREAK BULK FREIGHT VESSELS. These vessels travel through Bay Area waters up to the ports of Stockton and Sacramento where they often load grain, rice, logs, wood chips, and other dry bulk cargoes. These vessels also discharge cement, steel coils, and other general cargoes. They transit through "Gasoline Alley" (Richmond, Rodeo, Martinez, Benicia, Concord, Pittsburg, and Antioch) enroute inland where the potential for collisions with tank vessels at or near oil terminals is always present. Dry bulk, neo-bulk, and break bulk vessels also call at terminal facilities in Alameda, Redwood City, and Richmond.

BARGES. Barges are used in transporting bulk petroleum and chemicals to and from the Bay Area. Petroleum barges are also used extensively for bunkering. Barges under tow are found offshore, throughout the Bay Area, and in the Delta.

MILITARY VESSELS. These may be berthed at, or in transit to or from Naval Weapons Supply Facility Seal Beach Detachment (old Naval Weapons Station Concord), Alameda Point, and Suisun Bay Reserve Fleet. Military vessels may also be berthed at, or in transit to or from San Francisco Bay Area piers for lay over or ship repair purposes.

RECREATIONAL VESSELS. These are found in large numbers at marinas, fueling docks and operate throughout Bay Area waters, including the Delta and off-shore.

8100.9.2 Waterfront Facilities

Waterfront facilities supporting a wide variety of maritime industry activities are found throughout all areas of the Bay and Delta. Detailed descriptions and information concerning these facilities may be found in the annual Golden Gate Atlas World Trade Directory, the U.S. Army Corps of Engineers' Port Series reports (No. 30, 31, and 32), and the facility files maintained at Coast Guard Marine Safety Office San Francisco Bay.

Waterfront Facilities. In San Francisco Bay several Waterfront Facilities are authorized to handle explosives. In San Francisco, Pier 80 is the only authorized facility that can handle explosives. In Oakland all of the containerized facilities are authorized to handle explosives. Four of the container facilities in the Oakland outer and middle harbor areas routinely ship commercial explosives. In addition, the Port of Sacramento and the Port of Stockton are also authorized to handle explosives. In the event of a national emergency all Dry Bulk and Container Waterfront Facilities can handle explosives after receiving a Coast Guard inspection.

8100.9.3 Anchorage

Seventeen designated anchorages in the San Francisco Bay area provide safe haven for vessels escaping winter storms, repairing damaged machinery or waiting to fill their holds with cargo bound for overseas. Many of these anchorages are monitored by the Vessel Traffic Service (VTS) to ensure vessels are positioned safely to prevent casualties due to anchor swing. These anchorages are also positioned so that navigable channels are clear for transiting marine traffic. As defined in 33 CFR 110, four anchorages are designated for explosive handling. Explosive anchorages 9, 12, and 14 are located within San Francisco Bay and anchorage 30 is located in the San Joaquin River.

8100.9.4 Naval Weapons Support (NWS) Seal Beach Detachment

NWS is an inland deep-water facility located near the City of Concord in Contra Costa County. The US Army is operating the piers at this Naval Facility and plans to receive and load 6 to 10 ships per year with explosives. Their Marine Ocean Terminal Concord (MOTC) group will handle the US Army operation. MSO personnel will monitor explosive load outs.

8100.10 Critical Success Factors

'The timely and efficient restoration of normal conditions within the limits of acceptable risk'

This document provides for a coordinated response by the U.S. Coast Guard and other federal, state, local, and civilian forces to major fires on board vessels or at waterfront facilities. It provides policies, responsibilities, and procedures for coordination of on-scene forces. The Marine Fire Fighting Contingency Plan is designed for use in conjunction with other state, regional, and local contingency plans. It is supported by an library at Marine Safety Office San Francisco Bay, including NFPA 1405 and International Fire Service Training Association (IFSTA) Marine Fire Fighting texts. Response forces for the purposes of this plan include:

- Public Safety Agencies
- Waterfront Facility Owners and Operators
- Vessel Owners and Operators
- United States Coast Guard
- Other Military Departments or Agencies

It is apparent, given the public response to vessel casualties in the aftermath of the T/V *Exxon Valdez*, that the public expects no less than an aggressive, coordinated, and fully committed response by involved parties to minimize the threat to public safety and the environment. All public safety agencies must be prepared to fulfill these expectations.

Generally, no one agency has sufficient resources to singularly combat a major vessel fire. Consequently, material assistance and cooperation is a prerequisite if a successful

attack and extinguishment is to ensue. In addition, the potential impacts resulting from a vessel or facility fire, depending upon its location, meteorological conditions, and cargoes involved, may seriously affect several jurisdictions.

8100.11 Concept of Operations

The COTP exercises primary federal responsibility for the safety and security of the port. This responsibility is discharged by enforcing dangerous cargo regulations, marine terminal safety regulations, pollution prevention regulations, and administering the Vessel Traffic Service (VTS). In emergencies, the COTP may control the movement of ships and boats, establish safety zones and provide on scene forces. Responsibilities of the COTP in a major fire aboard a vessel or waterfront facility include, but are not limited to:

- Assume IC for burning vessel underway or at anchor when:
  - the fire department with jurisdiction is unable to respond
  - no fire department has jurisdiction
- Assume operational control of all Coast Guard forces on-scene.
- Establish safety or security zones as necessary.
- Provide information on involved waterfront facilities.
- Provide information on the location of hazardous materials on the vessel, or at the facility, if available.
- Provide technical data on ship's construction, stability, and marine fire fighting considerations.
- Respond to oil or hazardous materials discharges. Actual removal may be delayed until the fire fighting operations are terminated.
- Obtain tugs to assist in relocating moored or anchored vessels.
- Alert owners/operators of terminal or vessel at risk.
- Provide portable communications equipment to response personnel, as needed and available.

8100.12 General Hierarchy of Strategic Planning Priorities

8100.12 .1 Introduction

GENERAL. The success or failure of shipboard fire fighting operations may be determined by the vessel's location. If the ship is remotely located or otherwise inaccessible, the opportunity for saving it may be lost. The COTP will confer with fire departments, port officials and other agencies to identify the best sites for positioning a burning vessel given the facts of a particular incident. Such sites may include piers, anchorages, or predetermined grounding sites. The COTP's approval is needed for any change of location of the vessel.

This section will discuss the strategic objectives, as well as general response philosophy, strategies, and countermeasures that will be applied by the Incident Command System (ICS)

8100.12.2 Strategic Objectives

PRIORITIES. It is impossible to anticipate every task or activity required to effectively respond when dealing with a major marine fire. There are, however, several basic priorities which must be addressed, particularly in the case of a vessel fire at sea.

- Once initial notification is received, responders must determine the urgency of the situation, estimate the potential for a 'worst case scenario' and its probability.

- If escalation of the incident to a 'worst case scenario' appears imminent and substantial, then response resources must be dispatched before conducting routine information gathering and making agency notifications.

NOTIFICATION PROCESS. Generally speaking, a call to the 24-hour watch in the MSO Command Center will be received by the MSO Command Duty Officer who will then notify:

- Coast Guard Search and Rescue Assets
- Fire Boats
- Local Authorities
- State Agencies

Any agencies receiving notification of a marine fire should contact the MSO's 24-hour number at **(510) 437-3073**.

MSO SAN FRANCISCO. Typically, marine related incidents are reported to the MSO via a harbormaster, local agency, concerned citizen, boat owner, etc. Information from all reports is entered into a case folder and assigned a unit case number. When MSO personnel are aware of exactly who to contact, MSO personnel will contact those agencies and officials directly to ensure the "right" agencies are notified of the incident. Refer to Resource Guide section 8800, #7 for numbers.

LOCAL FIRE DEPARTMENT. Our first external notification is to the local fire department exercising jurisdiction over the incident, unless MSO received notification from that fire department. Refer to Resource Guide section 8000, #9 for numbers.

CALIFORNIA OFFICE OF EMERGENCY SERVICES. Notify of all incidents with the potential for or actual release of oil or hazardous substances. OES is mandated to notify appropriate state and local officials. Inform OES of any unusual or unique notifications need to be made for a particular incident. Normally, notification to the California Office of Emergency Services is sufficient for all state and local agencies.

8100.12.2.1 Considerations in Selecting a Fire Fighting Pier

Piers are not the only sites that can or should be considered for locating a burning ship. However, piers offer the greatest potential to maximize use of shore-based fire fighting resources. The following factors should be considered when selecting a pier:

- The severity of the fire
- The proximity of the pier to populated areas
- Bridges, highways, and environmentally sensitive areas
- Availability of the pier for an extended period
- Availability of water and electricity
- Construction of the pier
- Prevailing winds
- Availability of fire fighting staging areas
- Presence of hazardous materials at the pier and on the vessel
- Availability of special equipment

8100.12.2.2 Pre-Designated Fire Fighting Piers

The listing of a pier or facility in the plan does not mean that the Coast Guard or any other agency will unilaterally direct a burning vessel to that facility. At a minimum, a decision of this nature must be discussed with representatives of:

- The vessel
- The facility
- The appropriate Port Authority
- The appropriate Fire Department

- The Coast Guard/ICS (if stood up)
- Other agencies, depending on the particular situation

Refer to the **Resource Guide** section 8800, #16 for listings and information on piers for fire fighting.

8100.12.3 Pre-Designated Anchorages

For planning purposes the following San Francisco Bay anchorages have been pre-designated as generally appropriate for positioning a burning vessel:

- **Anchorage 7** - Off Treasure Island
- **Anchorage 9** - South S.F. Bay (Contains #12 and #14)
- **Anchorage 12** - South S.F. Bay off Pier 70
- **Anchorage 14** - South S.F. Bay off Hunters Point

Anchorages 12 and 14 are normally designated as explosive anchorages. When a burning vessel is located in either anchorage, the outer boundary of the anchorage will be the minimum separation between the burning vessel and other ships.

8100.12.2.4 Grounding Sites

Grounding sites must be approved by the COTP

A decision may be made to either ground or sink a vessel. In choosing grounding sites, several factors must be considered. The possibility of the vessel sinking or becoming derelict must be considered. Such events could become a greater hazard to the marine ecological system through resultant pollution than the total loss of a single ship in a pre-designated area.

Other important considerations for grounding include:

- Bottom Material: Soft enough that the ship's hull will not rupture.
- Water depth: Shallow enough that the vessel will not sink below the main deck, yet deep enough that fire boats, salvage barges and tugs can approach.
- Weather: Areas not known to have strong winds or currents which could hamper fire fighting or salvage efforts.

8100.12.4.1 Pre-Designated grounding Sites

For planning purposes, the following locations have been pre-designated as generally appropriate for grounding a burning vessel.

- *San Pablo Bay:* Immediately outside the traffic separation scheme, between Point San Pablo and Pinole Point.
  Mean Low Water = 23'

- *Anchorage 13 (Explosive):* Immediately west of the traffic separation scheme, south of the Richmond/San Rafael Bridge.
  Mean Low Water = 25'

- *Central San Francisco Bay:* Approximately 1 mile north of Treasure Island, 3 miles west of Berkeley Yacht Harbor.
  Mean Low Water = 14'

- *Central San Francisco Bay:* The easterly half of Anchorage 8.
  Mean Low Water = 25'

- *South San Francisco Bay:* The area immediately to the south of, and outside the boundaries of Anchorage 14.
  Mean Low Water = 29'

- *Tip of Sherman Island* in the Delta.
  Mean Low Water = 26'

- *Anchorage 26:* north of the D.O.T. Reserve Fleet.
  Mean Low Water = 19'

8100.12.5 Locations Offshore For Intentionally Sinking Vessels

When a vessel and cargo are deemed a total constructive loss it may be best to sink it in an area where environmental damage is minimized. These areas will be selected by a Regional Response Team (RRT) comprised of State and Federal representatives. The COTP will request this team be convened when intentional sinking of a vessel is considered.

8100.12.6 Considerations on movement of a burning Vessel

There are numerous considerations that the COTP should evaluate when faced with the decision of whether or not to allow a burning vessel to enter or move within a port. The following information should be gathered and considered prior to making such a decision:

- Location and extent of fire
- Status of shipboard firefighting equipment

- Class and nature of cargo (HAZMAT)
- Possibility of explosion
- Possibility of vessel sinking/capsizing
- Hazard to crew or other resources where vessel is present
- Forecasted weather (including bar conditions if applicable)
- Maneuverability of the vessel (i.e. is it a dead ship, etc)
- Availability (and willingness) of assist tugs
- Effect on bridges under which the vessel must transit
- Potential for the fire to spread to the pier or pier structures
- Firefighting resources available ashore and offshore
- Consequences/alternatives if the vessel is not allowed to enter or move
- Potential for pollution

8100.13 Geographic and Jurisdictional Boundaries

8100.13.1 COTP Area of Responsibility

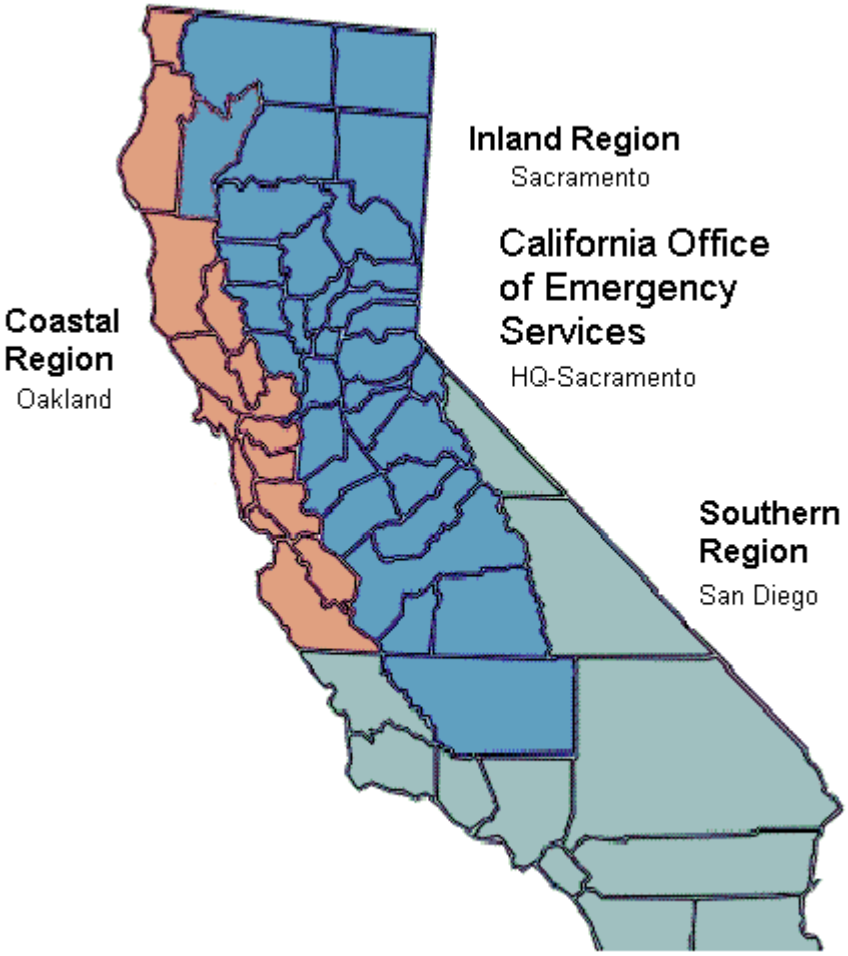
Marine Safety Office San Francisco Bay's Captain of the Port (COTP) Area of Responsibility (AOR) is specified in 33 CFR 3.55-20 and comprises the land masses and waters of California north of San Luis Obispo, Kern and San Bernardino Counties; Utah, except for Washington, Kane, San Juan, and Garfield Counties; and Nevada except for Clark County.

8100.13.2 OES Area of Responsibility

California OES is divided into three divisions.

The Coastal Division consists of 16 counties, 15 of which have Pacific Ocean or San Francisco Bay/Delta waters touching their borders. All of the counties in this region are within the MSO San Francisco COTP zone. The Coastal Division office is located in Oakland.

The Inland Region consists of 31 counties. All but the southernmost county of Kern falls within the MSO San Francisco COTP zone. The Inland Division office is co-located with OES Headquarters in Sacramento.


Inland Region
Sacramento
California Office of Emergency Services
HQ-Sacramento
Coastal Region
Oakland
Southern Region
San Diego

8100.14 Federal, State and Local Response Systems

8100.14.1 National Response System

The Coast Guard exercises primary federal responsibility for the safety and security of the ports and waterways of the United States. Because the Coast Guard has limited resources to respond to waterfront fires, emphasis is placed on preventive measures through the Port Safety Program. Local port operators, municipalities, and public safety agencies are expected to provide and maintain adequate disaster response capabilities in their ports.

The Coast Guard will assist local fire fighting units when requested in accordance with this plan, and to the extent resources permit. If a vessel at anchorage experiences a fire, "assistance as available" may include coordination of fire fighting efforts if the Coast Guard is in the best position to assume command. Lack of response by other Bay Area response agencies may require Coast Guard assistance. However, Coast Guard participation **does not** relieve local jurisdictions of their responsibilities.

This plan is based on the assumption that a major marine fire, particularly a vessel fire, will usually require resources beyond those locally available. Previous marine related incidents demonstrate this and the necessity for contingency planning. The T/V *Puerto Rican* explosion and fire off the approaches to San Francisco Bay and the T/V *Mega Borg* explosion and fire off Galveston, Texas are examples of such incidents, and associated problems (difficulty in getting proper equipment on-scene, weather complications, etc.). Contingency planning identifies the means and methods necessary to make resources available from federal, state, and local agencies.

Prior coordination is particularly applicable to the San Francisco Bay Area for several reasons:

- The large geographic area of the Bay
- The wide variety of marine activities that take place at all times of day and night
- The many independent public safety agencies and private industry resources that may be called upon to provide fire fighting assistance

When a disaster occurs, a State Governor may request the President to declare a major disaster or an emergency if an event is beyond the combined response capabilities of the State and affected local governments. Based upon the findings of a joint Federal-State-local Preliminary Damage Assessment (PDA) indicating the damages are of sufficient severity and magnitude to warrant assistance under the Act, the President may grant a major disaster or emergency declaration authorizing the Federal Emergency Management Agency (FEMA) to perform relief operations as per the Stafford Act. (Note: In a particularly fast-moving or clearly devastating disaster, the PDA process may be deferred until after the declaration.)

1. If an emergency involves an area or facility for which the Federal Government exercises exclusive or primary responsibility and authority, the President may unilaterally direct the provision of emergency assistance under the Stafford Act. The Governor of the affected State will be consulted if possible.

2. No direct Federal assistance is authorized prior to a Presidential declaration. However, FEMA can use limited pre-declaration authorities to move Initial Response Resources (critical goods typically needed in the immediate aftermath of a disaster, e.g., food, water, emergency generators) and emergency teams closer to potentially affected areas. FEMA also can activate essential command and control structures to lessen or avert the effects of a disaster and to improve the timeliness of disaster operations. Additionally, when an incident poses a threat to life and property that cannot be effectively dealt with by the State or local governments, FEMA may request the Department of Defense (DOD) to utilize its resources prior to a declaration to perform any emergency work "essential for the preservation of life and property" under the Stafford Act.

3. Following a declaration, the President may direct any Federal agency to use its authorities and resources in support of State and local assistance efforts to the extent that provision of the support does not conflict with other agency emergency missions. This authority has been further delegated to the FEMA Director; the FEMA Associate Director, Response and Recovery; the FEMA Regional Director; and the Federal Coordinating Officer (FCO).

4. The FEMA Director, on behalf of the President, appoints an FCO, who is responsible for coordinating the timely delivery of Federal disaster assistance to the affected State, local governments, and disaster victims. In many cases, the FCO also serves as the Disaster Recovery Manager (DRM) to administer the financial aspects of assistance authorized under the Stafford Act. The FCO works closely with the State Coordinating Officer (SCO), appointed by the Governor to oversee disaster operations for the State, and the Governor's Authorized Representative (GAR), empowered by the Governor to execute all necessary documents for disaster assistance on behalf of the State.

5. The State must commit to pay a share of the cost to receive certain types of Federal assistance under the Stafford Act. In extraordinary cases, the President may choose to adjust the cost share or waive it for a specified time period. The Presidential declaration notes any cost-share waiver, and a FEMA-State Agreement is signed further stipulating the division of costs among Federal, State, and local governments and other conditions for receiving assistance.

6. While performing a function under the authority of the Stafford Act, a Federal agency or designated employee of a Federal agency is not liable for any claim based upon the exercise or performance of or the failure to exercise or perform that function.

7. Response by agencies to lifesaving and life-protecting requirements under the FRP has precedence over other Federal response activities, except where

national security implications are determined to be of a higher priority. If a disaster or emergency affects the national security of the United States, appropriate national security authorities, plans, and procedures will be used.

8100.14.2 State Response Systems

OFFICE OF EMERGENCY SERVICES (OES), STATE OF CALIFORNIA. This agency must be kept informed of the magnitude and nature of the incident and problems encountered. Incident liaison should be accomplished and maintained by the local fire department representative involved. OES has access to a large variety of response personnel and equipment. OES will also notify other agencies within the state such as:

- Department of Fish and Game, Office of Oil Spill Prevention and Response (OSPR)

- Department of Health Services

The California State Office of Emergency Services (OES) Fire and Rescue Plan, under the authority of the California Master Mutual Aid Agreement, is the legal basis for mutual aid within the State. Mutual aid requests must be originated through appropriate channels (local => to operational area => to region => to state) in accordance with the plan. Local jurisdictions are not barred from developing mutual aid or automatic aid agreements of their own (refer to the *California Fire and Rescue Plan*, by the State Office of Emergency Services.

The OES Warning Center is staffed 24 hours a day, 365 days a year. From this center, warning controllers speak with county OES's and the National Warning Center in Berryville, Virginia on a daily basis. OES also maintains a 24-hour toll-free toxic release hotline, and relays spill reports to a number of other state and federal response and regulatory agencies, as well as local governments.

OES' training arm, the California Specialized Training Institute in San Luis Obispo, provides training programs for city, county, and state emergency services personnel on the latest techniques in disaster planning, response, recovery and management.

8100.14.3 County Offices of Emergency Services (OES)

- **Alameda County Response System**

County OES: (510) 667-7721 (24 hr)

- **Contra Costa County Response System**

County OES: (925) 228-5000 (24 hr)

- **Marin County Response System**

County OES (415) 499-6584

- **Sacramento County Response System**

Sacramento OES (916) 845-8711

San Francisco City / County Response System
San Francisco OES (415) 558-2702, Duty Officer pager 24hr (866) 298-4515

- **San Joaquin County Response System**

San Joaquin County OES (209) 468-3962

- **San Mateo County Response System**

County OES: (650) 363-4790 (24 hr)

- **Santa Clara County Response System**

Santa Clara OES (408) 299-3751

- **Solano County Response System**

County OES: (707) 421-7090 (24 hr)

8100.14.4 Local Response System

See chapter 8800 of this plan for specific information on local resources.

LOCAL FIRE DEPARTMENTS**.** Local fire departments are responsible for fire protection within their jurisdictions. In a number of jurisdictions, this responsibility includes marine terminals and facilities. Some terminals and facilities have in-house fire departments. In most cases, the terminal fire departments have entered into mutual aid agreements with the surrounding local fire departments. Typical responsibilities of local fire departments include:

- Assume position of Incident Commander (IC).
- Establish and staff a Command Post when acting as IC.
- Dispatch necessary personnel and equipment.
- Determine the need for, and request mutual aid such as fireboats and appropriate medical aid.
- Make all requests for Coast Guard/federal personnel, equipment, and waterside security through the COTP.
- Establish liaison with law enforcement for land-side traffic and crowd control, scene security, and evacuation.
- Provide portable communications equipment to response personnel from outside agencies.

INDUSTRIAL FIRE DEPARTMENTS/BRIGADES. Certain large industrial plants within the Bay Area have personnel trained in fire fighting. Many have limited capabilities and

are unable to render mutual aid assistance. One exception is the Petrochemical Mutual Aid Organization.

PETROCHEMICAL MUTUAL AID ORGANIZATION (PMAO). PMAO is an emergency response cooperative of oil, chemical and related companies. Its primary purpose is provide assistance (equipment and materials) to any member company requiring aid. See PMAO Emergency Response Manual for further information.

FIRE BOATS. Very few dedicated fireboats are available in the Bay Area. The availability of vessels varies according to jurisdictional coverage requirements, mutual aid agreements, and maintenance or repair conditions. Therefore, requests for fire fighting vessels should go through the COTP**.** See the **Resource Guide** section 8800 for a listing of waterborne resources (fireboats, tugs and barges) and COTP telephone numbers.

MARINE CHEMIST. The on scene assistance of a marine chemist may be vital to assure the safety of response personnel. A marine chemist should be immediately identified and be available to conduct such on board testing of spaces or tanks as may be necessary. Marine chemists are listed in the **Resource Guide** section 8800.

SALVAGE COMPANY REPRESENTATIVE. If it appears that the fire-fighting response will be shifted to a commercial fire fighting/salvage company, it is essential that the IC/UC meet and confer with a representative of the commercial fire fighting/ salvage company. Such action will result in all parties understanding the situation aboard the stricken vessel at the time. The vessel owner will normally be the party that hires the fire fighting/salvage company. Both Marine Fire Fighting Response Companies and Salvage Response Companies are listed in the **Resource Guide** section 8800.

TERMINAL MANAGER. Terminal Managers are extremely valuable and can provide the IC data and maps concerning the facility. This information will assist during fire fighting and cleanup operations. Contact MSO for information or refer to latest edition of the Golden Gate Atlas by Marine Exchange of the San Francisco Bay Region.

8100.15 Plan Review

The plan will be available on the MSO SFB's website at www.uscg.mil/d11/msosf for viewing. Revisions/comments may be made to LT Jesse Stevenson.

The Coast Guard Captain of the Port (COTP) is responsible for this plan and will keep it current by consecutively numbering amendments or by issuing a revised plan. Any errors, suggested improvements, or changes in equipment or facilities should be communicated to:

Commanding Officer (mer)
Attn: LT Jesse Stevenson
USCG Marine Safety Office, Bldg. 14
Coast Guard Island

Alameda, CA 94501

Or call (510) 437-3856
Email address: jstevenson@d11.uscg.mil

Each revision will be accessed via the Internet. This step has been taken to allow other Coast Guard units to view this plan and utilize it as a template for their own plans. The plan will be updated through electronic means when necessary. This will make real time up to date information possible rather than annual corrections.

The plan may be accessed and downloaded to disk from the Internet:

www.uscg.mil/d11/msosf

8100.16 Exercise Process

Proper training and exercises are necessary to ensure smooth coordination in the event of an actual fire or incident. Realistic exercises also demonstrate the capabilities of the various organizations involved. These exercises also point out possible conflicts and/or opportunities to improve the plan.

EXERCISES. COTP San Francisco Bay will plan periodic exercises with selected fire departments, port facilities, and government agencies. The COTP also recommends each fire department or response organization coordinate with port facilities and shippers in their respective jurisdictions and workout training and exercises on their own. The COTP will also provide coordination with other organizations if a larger exercise is required. For assistance in arranging an exercise, contact:

Commanding Officer (mer)
Attn: LT Jesse Stevenson
USCG Marine Safety Office, Bldg. 14
Coast Guard Island
Alameda, CA 94501

Or call (510) 437-3856
Email address: jstevenson@d11.uscg.mil

TRAINING. Training is the cornerstone of effective response. Effective training is the difference between saving lives and property, and having a major port disaster. The following is a list of available fire fighting schools.

- California Maritime Academy/SFFD
  200 Maritime Academy Drive
  P.O. Box 1392
  Vallejo, CA 94590

- California Maritime - Fire Fighting School
  600 Avenue M
  San Francisco, CA 94130

- Texas A&M Fire Training Division
  J. B. Connally Bldg. 301 Tarrow-TEEX
  College Station, Texas 77840-7896
  http://teexweb.tamu.edu/fire

- UNR Fire Academy – Elko Campus
  100 University Avenue
  Carlin, NV 89822-0877
  www.unr.edu/fireacademy

TRAINING SESSIONS. The COTP may provide training sessions periodically for local fire departments, facility owners/operators, and shipping companies. Such training might discuss ship construction and basic stability, shipboard/facility fire fighting, and hazardous chemical response. Suggestions for other training, volunteer speakers, and general comments concerning this program should be directed to:

Commanding Officer (mer)
Attn: LT Jesse Stevenson
USCG Marine Safety Office, Bldg. 14
Coast Guard Island
Alameda, CA 94501

Or call (510) 437-3856
Email address: j.Stevenson@d11.uscg.mil